Introduction

Currently, no theory has integrated psychological and biological aspects within the underpinnings of neuroscience which is already explained in Vedanta concepts to classify mind learning patterns. Modern science seems to be the copy of already taught Vedantic scriptures. Future learning models in psychology should be grounded on the biological functions of the nervous system and not just be limited to the brain to establish a robust theory rooted in Vedanta crediting the original contributors; instead of morphing the ideas and practising unethical practices. This study introduces a model that elucidates the classification and nature of learning through emotions and intelligence (soul). The aim is to offer a systematic cataloguing method that incorporates the nature of emotions, thus forming an emotion classification tree. A Vedanta mind classification could address the limitations of the psychodynamic theory and provide a biological explanation of learning from a psychological standpoint. This classification should be age-neutral, incorporate nervous system functioning, and foster a clear understanding of mind learning through emotions. Furthermore, it could elucidate emotions, structure learning, and improve mind classification.

Nevertheless, for limited understanding, classifying emotions in terms of the conscious, subconscious, and unconscious mind can distinguish the emotional criteria of adequacy (i.e., the influence of the childhood mind on the adulthood mind and vice versa) and integrity (i.e., the

subjectivity of the therapies used) for any patient. This could be applied in counselling sessions. In this paper, the term "subconscious" is used to denote both "preconscious" and "subconscious" to maintain consistency. Essentially, understanding the origin of emotions can enhance the comprehension of a patient's condition for diagnosis and the derivation of the optimal therapeutic approach. The proposed emotion-based mind learning classification focuses on three states of the mind and elucidates learning behaviours. It could help organize all types of emotions into mind learning patterns while clarifying the subjectivity of consciousness due to individual differences. Consequently, this innovative mind learning model may assist in identifying therapeutic approaches for one-on-one counseling sessions.

Moreover, this subjectivity applies to the socially learned subconscious and unconscious mind states. This classification aligns with the explanation for neural patterns, which demonstrate the dynamic nature of mind learning, and supports the presence of A (access; adulthood mind) and P (phenomenal; childhood mind) consciousness (Gamble 1997). It also accounts for cognitive blind spots during periods of self-unawareness due to the presence of the childhood mind.

Mind learning transpires through communication between the brain and sensory organs, subsequently influencing the motor/sensory system. This process is facilitated by both the central (CNS) and peripheral (PNS) nervous systems. Similarly, this Vedanta mind learning classification may be based on the bottom-up and top-down methods of two-way communication between the CNS and PNS. It may also explain how advanced emotions traverse this

mind model via the unconscious, subconscious, and conscious states, intensifying conflicting and mixed emotions and illustrating the emotional blindness of the adulthood mind. For instance, the societal teaching that "boys never cry" can lead to emotion masking in boys, thereby paving the way for emotional blindness. However, this descriptive research does not aim to contradict other classifications; instead, it seeks to unify them under one classification, thereby promoting further research. Also, this research aims not to ignore the part of the spiritual side which explores beyond five sense organs and beyond materialistic realms determining the importance of Vedanta (exploring Upanishads, etc) teachings (in terms of nervous system, emotions, psychology, evolution [involuted], mind states, etc which includes all biological, psychodynamic, behavioural, cognitive, spiritual, and humanistic aspects) in Psychology and comparing with the Western Psychology of how it contributes to the future research dismissing the concepts of Western psychology due to its limitation of understanding the mind as briefed in the introduction. Also, as the title says, one might wonder how the nervous system or mind might work at the cellular level. According to the Vedanta, there is no difference between the mind and body and hence the working. They work together and the respective genetics work in the accordance of evolution (from involution) of mind/ body accordingly works in the cellular level (in accordance with the Pancha kosha theory). In other words, the impressions of the nervous system at the cellular level defines the working of the Vedanta model of mind learning patterns. As evidence this, the book *Discourses on Yog* by Prashant S. Iyengar sheds light on the nature of the mind by writing that "all the features of the body, states of life

and awareness are really mental only", and not to look at the body in a separate point of view. The book also specifies that the mind has its centre in every cell of the body in all states of awareness (all states of consciousness; waking, dream, deep-sleep states) and all experiences supporting this book, talking that "every part of the body is factually a part of the mind" where Turiya state (soul's consciousness) essentially being the continuous stream for all these three states. Additionally, infusing concepts of Doshas in my next book. Also, there are no such terms like neurons, neurotransmitters in ayurveda as per current knowledge; however, this model for the current being considers the same till the updated version of knowledge is found (we can find that cellular is contrasting 35). Nevertheless, we will see how we can learn about such impressions working in the cellular level in our next book.

BACKGROUND

As a psychology student in a half-baked Westernized society, I was puzzled by the term "conscious," which can refer to the conscious mind (i.e., mindfulness) or the act of becoming conscious (often viewed negatively). Phrases like "I felt self-conscious while speaking, and hence, I could not perform well" and "One has to be conscious while speaking" sparked my interest in consciousness. Despite initial uncertainty, I found ample evidence through natural observations—supported by scientific evidence—to propose the concept of the potential existence of two degrees (not types) of consciousness, further explained in this paper. In line with the structure of a standard research study, this exploration of mind learning states commences with a literature review to provide the necessary background and context.

BIOLOGICAL EVIDENTIAL VIEW OF THE CONSCIOUS, SUBCONSCIOUS, AND UNCONSCIOUS MIND STATES

Brain

Conscious Mind and Conscious Workings of the Brain

Certain regions of the brain become conscious during activity through unknown mechanisms, yet no common consciousness structure has been identified. The prevalent "global workspace theory" (Baars 1988) posits that integration occurs when the events of various brain regions become unified via neuronal activity, and the unified product is projected into consciousness. Numerous neuroimaging studies have identified the basal ganglia, thalamus, and basal forebrain as the locations of consciousness (Fiset et al. 1999, Lull et al. 2010, Långsjö et al. 2012, Lutkenhoff et al. 2015, Weng et al. 2017, Zheng et al. 2021).

Subconscious Mind and Subconscious Workings of the Brain

The corpus striatum (caudate and lentiform nuclei) is involved in the automatism of motor activities, and pathogenic lesions tend to affect associated movements, such as walking (Koshi 2018). The basal ganglia may also be involved in the automatism of other brain regions (Packard and Knowlton 2002, Lanciego et al. 2012). Thus, automatic memory recall, also known as procedural memory, primarily consists of subconscious brain activities initiated by our conscious demand and is practically effective. However, certain associated functions may operate at a minimal consciousness level; for example, when riding a bicycle

while deep in thought, physical movements are made subconsciously, while the visual imagery of the road is processed at a minimal consciousness level.

Unconscious Mind and Unconscious Workings of the Brain

In their renowned series of experiments, Bargh et al. (1996) demonstrated that when presented to participants in a specific way (e.g., during a scramble-sentence task), words associated with particular characteristics (e.g., polite, rude, and old age) altered participant behaviour. Visual exposure to age-related words was linked to emotional memories related to those words, particularly those of "despair" (as opposed to "hope") based on the knowledge of relevant facts and ideas. Hence, this arousal of memories was effective not only for recalling the related words but also for the emotions associated with them.

Collectively, several variables shape our actions and behaviours. For example, our minds become fearful when reading a ghost story, and this fear influences subsequent actions (e.g., we fear being left alone). The brain regions executing unconscious functions, such as maintaining our heart rate, body temperature, visceral function, cerebellar tone, and posture and coordinated muscle activities, are not controlled by conscious and subconscious factors. However, any conscious or subconscious activity affecting any of these domains can influence and affect other parts of the brain.

Neurophysiological psychology provides another source of evidence. Following direct stimulation of the temporal cortex, patients reported phenomenal experiences from "back in the day," including the full range of emotions and visual or acoustic components (Penfield 1958). The CNS appears to preserve a record of partial experiences and perceptions

in extraordinary detail, which is not normally accessible to the conscious self. These perceptions, perhaps encoded as memories, may form the foundation of the subconscious and unconscious systems.

Additionally, investigation of the underlying mechanism involved in unconscious phenomena is warranted, which Fonagy (2016) considers much more relevant than the direct tests of Freud's theory. Although researchers often focus on the mind states of the brain, whether parts of the nervous system, such as the spinal cord and PNS, possess conscious, subconscious, or unconscious states remains unknown. Hence, this query was examined from a logical point of view in this study.

PNS

According to the "received view" (Klein 2015), memory is any state or process resulting from the sequential stages of encoding, storage, and retrieval. Currently, three transient mind states in psychology—conscious, subconscious, and unconscious—are known to hold certain information, suggesting that mind states should exist wherever there is memory, including within the spinal cord. The primary functions of these mind states are encoding and retrieval, necessitating storage capacity. This is also true for the PNS.

While evidence exists on how the CNS and brain process memory and how the spinal cord possesses memory traces, the role of the PNS concerning mind states is unclear. However, it can be presumed that the PNS might possess mind states since information requires storage before reaching the CNS. Thus, neurons could store perceived information through action potentials, and this storage of

neural information is possibly why it is referred to as stored information, as it requires memory. However, it is important to note that the PNS memory differs from the CNS memory.

Notably, the "received view" follows a top-down approach. It may be inappropriate to state that the PNS, which follows a bottom-up approach, has emotions because the PNS function is not regulated by the CNS, and they are only correlated. Although memory and emotions are highly integrated processes, the presence of emotion does not necessarily indicate the presence of memory, and vice versa. Thus, memory can either be enhanced or suppressed depending on the situation and the emotions it provokes. Memory can be stored without emotions; however, emotions affect the information encoded by memory, particularly how much of the memory is stored and how it is retrieved later. Let us explore this further to enhance our understanding.

Non-Emotions: A Relatively Permanent Change

Some mental patterns are temporary, while others are permanent. For example, learning how to cycle or swim is more permanent than information learned for examinations. Memories are directly related to emotions; the stronger the emotions, the stronger the memories. But how do cycling or swimming relate to the topic at hand? What emotions are associated with these activities? Why do we not forget these types of activities once learned? It is because activities that involve muscle memory are more permanent than those that do not, as the former require minimal information from the CNS, making this process comparatively quicker. Therefore, even if the person cannot remember, muscle memory is relatively permanent and does not expire.

Top-Down and Bottom-Up Approaches of the Nervous System

The nervous system, a complex network of cells and structures, is responsible for coordinating and controlling bodily functions. It can be understood through two complementary approaches: the top-down and bottom-up approaches.

Top-down Approach—The top-down approach refers to the influence of higher brain areas on lower-level processes, involving the brain's ability to control and influence sensory input and motor output. Evidence for the top-down approach includes:

1. **Cognitive Control:** Studies indicate that higher brain areas, such as the prefrontal cortex, play a crucial role in executive functions, including attention, decision-making, and problem-solving. These regions guide and modulate sensory processing and motor responses based on cognitive demands.
2. **Attentional Control:** Research on attentional processes demonstrates top-down modulation. For instance, in selective attention tasks, participants can attend to specific stimuli while ignoring others. This shows that higher brain areas influence the filtering and prioritization of sensory information.
3. **Predictive Processing:** The brain generates predictions based on prior knowledge and expectations, allowing it to anticipate incoming sensory information. This top-down predictive processing enables efficient processing of sensory input by modulating neural responses in the lower-level sensory areas.

Bottom-up Approach—The bottom-up approach focuses on the processing of sensory information from the periphery to higher brain areas, involving the integration and interpretation of sensory input to generate meaningful representations. Evidence for the bottom-up approach includes:

1. **Sensory Receptors:** Sensory receptors in the PNS, such as photoreceptors in the retina or mechanoreceptors in the skin, detect external stimuli and convert them into electrical signals. These signals are then transmitted to the brain for further processing.
2. **Sensory Processing Hierarchy:** Sensory information is processed hierarchically, with lower-level sensory areas analyzing basic features (e.g., edges, colours, and tones) and higher-level areas integrating these features into more complex representations. This hierarchy is evident in visual processing, where information from the retina is processed in the visual cortex.
3. **Reflexes:** Reflexes provide evidence of bottom-up processing. In response to certain stimuli, the nervous system generates rapid, involuntary motor responses. For example, the withdrawal reflex occurs when the skin senses pain, leading to an automatic retraction of the limb. These reflexes demonstrate that sensory information can trigger motor responses without the involvement of higher cognitive processes.

In conclusion, the top-down and bottom-up approaches of the nervous system are interrelated and work together to support perception, cognition, and motor control. Both approaches are supported by a wealth of evidence from neurophysiological, neuroimaging, and behavioural studies.

In the top-down approach, emotions in the PNS are seen as information relayed from the brain. However, in the bottom-up approach, the presence of emotions in the PNS is debatable, as emotions are traditionally considered to originate in the brain.

Bottom-Up Approach: Peripheral Nervous System Emotions and Mind States

Mind states can exist independently of emotions. The bottom-up approach in the PNS is associated with stored emotions and muscle memory. The best example of the PNS storing emotions is yogic physical practices. Yogic physical practices provide an example of the bottom up PNS storing emotions. Regular hip-opening exercises are advised to release negative emotions like guilt and fear stored in the hips. These exercises also boost sexual desire and aid in managing muscle imbalance, irregular periods, and reproductive health issues. Opening the sacral chakra stimulates creativity and promotes feelings of elation. In conclusion, the bottom-up approach suggests that the PNS can have mind states, and memory may exist. However, it further raises the question of how PNS emotions differ between the top-down and bottom-up approaches. The functionality of the respective biological systems may reveal how emotions are used.

Can the Conscious, Subconscious, and Unconscious Mind States Exist Without the Central Nervous System?

We have established that the PNS, from the bottom-up approach, can store information devoid of emotions. The next step is to determine whether this stored information can be divided between conscious and unconscious mind states without the involvement of emotions. The term "mind state" refers to an individual's current cognitive and emotional condition. While emotions often significantly influence mind states, it is possible for mind states to exist where emotions are minimal or absent.

In certain situations, an individual may experience a neutral or objective mind state where emotions are not prominent or are actively suppressed. For instance, when engaged in analytical or logical thinking, individuals may adopt a more detached and rational mind state, focusing on facts, data, and reasoning rather than experiencing strong emotions. Similarly, during states of deep concentration or mindfulness meditation, individuals may strive to achieve a calm and serene mind state, free from emotional distractions. These states often involve observing thoughts and sensations without becoming entangled in emotional reactions.

Notably, emotions may not be completely absent in such cases, but rather minimized or regulated to allow for specific mental processes. Given that emotions are an integral part of the human experience, they can subtly influence cognitive processes and overall mental functioning even when they are not the primary focus of a mind state. In conclusion, mind states can occur with minimal or no emotions.

Spinal Cord

Identifying memory traces in the spinal cord and the processes that produce them is complicated due to the complexity and limited accessibility of both the vertebra and CNS. Studies (e.g., Wolpaw and Carp 1990), have shown that the monosynaptic two-neuron pathway, which generates the spinal stretch reflex, can be operantly conditioned. The spinal cord houses memory traces responsible for these behavioural changes. The most probable locations for these traces are the Ia afferent neuron terminals synapsing with motor neurons or the motor neurons themselves. Spinal stretch reflex conditioning could serve as a valuable experimental model for researching vertebrate memory, as it modifies a simple, well-defined, and accessible pathway (Wolpaw and Carp 1990).

Peripheral Nervous System

The use of sensory organs, whether with full, partial, or no awareness, contributes to conscious, subconscious, and unconscious mind states, respectively. The PNS contributes to learning through sensation, attention, and perception (Brogaard 2010). The PNS contains a form of memory that differs from that found in the CNS. Traditionally, "memory" refers to the neurological function of the CNS that allows for the recall of events, objects, or places. This function is processed in brain regions such as the hippocampus and prefrontal cortex. The PNS, not equipped for this function, does not process it. However, the PNS can "learn" physical actions through repetition, strengthening neuromuscular circuits. It controls various body movements resulting from muscle contraction, which can be executed from memory (i.e., without conscious thought). For instance, professional

athletes who repetitively practice specific moves or skills can eventually perform these movements without consciously thinking about them. This phenomenon, often referred to as "muscle memory," is not independent of the CNS, which processes the received information at a higher-memory level. Furthermore, the sensory and motor divisions contain respective conscious, subconscious, and unconscious states. This is also true for the motor, autonomic, and somatic nervous systems, and the sympathetic and parasympathetic divisions of the autonomic nervous system (ANS).

ATTENTION AND MEMORY (CONSCIOUS, SUBCONSCIOUS, AND UNCONSCIOUS STATES)

Memory and attention are interdependent; however, not all observed stimuli are recorded in memory. This paper discusses two pieces of evidence supporting this interdependence. First, given that memory has a finite capacity, what can be encoded depends on attention. The role of attention in the emergence of unconscious memories is complex. Dividing attention during encoding inhibits the formation of conscious memories. Even when multi-tasking, such memories can still be encoded, but the stimuli required for encoding must be selected from among competing ones. Second, previous experiences guide what requires attention. Attentional tasks draw on memory-related brain regions, including the hippocampus and medial temporal lobe structures. Memory directly affects the frontal-parietal networks engaged in spatial orientation. Therefore, investigating the connections between attention and memory can reveal new information about these crucial areas (Chun and Turk-Browne 2007).

Sensation and Memory Learning

Studies validating Hebb's predictions of learning-induced changes (Vadakkan 2019) led to the discovery of long-term potentiation (LTP). Despite numerous correlations between LTP and behavioural indicators of memory retrieval, the process of memory acquisition through learning-induced changes remains elusive. The following observations regarding learning and uncorrelated LTP induction impose constraints on mechanism-focused approaches:

- High stimulus intensity, not expected in a learning mechanism, is necessary for LTP induction.
- A delay of at least 30–20 seconds exists between stimulation and LTP induction, contrasting with the millisecond timeframe for associative learning.
- The peak-potentiated effect (short-term potentiation) abruptly decreases at the time of delayed LTP induction, aligning with the transient changes expected during working memory.

Recently, a novel mechanism has been proposed to explain the relationship between memory and LTP, wherein memories are considered first-person internal sensations. This study integrates numerous psychological and neurological findings and proposes an additional testable learning mechanism (Vadakkan 2019).

Subconscious Visual System: Dreams

Subconscious Visual System

Mathematical modelling has been used to explore subconscious vision and gather information about conscious

vision. The retina was recently reported to harbor a distinct subconscious visual system, controlled by intrinsically photosensitive retinal ganglion cells (ipRGCs), which can operate even without rods and cones. Perl et al. (2020) developed mathematical models of ipRGC electrical activity to classify their responses. They then devised numerical techniques to simulate the entire retina on a large scale. Their methods revealed that the suprachiasmatic nucleus, a target of the ipRGCs and the brain's circadian clock, processes subconscious visual data to enhance visual function. As part of their ongoing research on the impact of light on circadian timekeeping, they created a smartphone application, "Entrain," to assist individuals in adjusting their circadian rhythms. This application has been installed nearly 200,000 times. Information collected from this application was used in one of the largest studies ever conducted on human sleep (Perl et al. 2020). Dreams serve as prime examples of subconscious or unconscious processing of information from sensory organs.

Although the term "autonomic" is used for involuntary movements, functions can still be executed through higher consciousness. Therefore, it encompasses not only unconscious memory states but also conscious and subconscious states. This paper discusses the PNS, particularly the ANS, in relation to the functioning of cells and specific organs in the body.

Non-Neural Cell Learning

Unprocessed traumatic memories can disrupt our mental and physical processes, much like a virus. Early research on cellular memory suggested that cells can retain memories of traumatic experiences (Evolution News 2018). The

"memory" of a cell, or a blueprint of its transformation from an undifferentiated embryonic cell into a specialized adult cell, is present in adult cells such as skin or blood cells. Research shows that genes that, when suppressed, effectively erase a cell's memory, rendering the cell more susceptible to reprogramming and thereby facilitating faster and more efficient reprogramming (Robbins 2015).

Cells can cognitively assess their environment, analyze the received information, and subsequently perform the appropriate action to ensure their survival (Brandman et al. 2005). Natural variations in the heart rate are often attributed to autonomic functions. Recent research suggests that conscious thought can change with variations in the heartbeat cycle (Natarajan 2023), confirming the existence of interference between the mind (childhood mind via adulthood mind, as explained later in the text) and body. This Mind- Body Interface represents the obstruction in information transfer between the adulthood and childhood minds with respect to the body's cells. The CNS is bidirectionally connected to the entire body through the PNS, as learning involves biological factors.

Moreover, Fuchs emphasized the concept of embodiment in his book *Ecology of the Brain: The Phenomenology and Biology of the Embodied Mind* (Fuchs 2017). While the brain is necessary for integrating bodily afferences and states, basic self-awareness emerges from the interaction of the entire body with the brain. Achieving embodied self-awareness is possible only through this homeostatic regulation, which is not limited to the level of the mind. Therefore, conscious human beings are considered embodied beings. The sensorimotor dimension is also crucial as it involves using

the limbs to establish connections, transcending the body when interacting with objects or other individuals in the environment.

These theories represent the Mind- Body Interface in mind learning but also highlight that the reverse can be true. Therefore, the cells in our bodies should be considered in the process of mind learning.

PREVIOUS KNOWLEDGE OF THE MIND LEARNING THEORY

Presence of the Conscious, Subconscious, and Unconscious States of Mind

Despite prevailing ambiguity, some evidence supports the existence of the subconscious and unconscious mind. Dewey (2007) argued that psychologists' evidence demonstrates that learning begins as an "unconscious" activity involving "unconscious" processes. Birch and Malim (2017) defined it as "one level below conscious awareness." Taylor (2007, p. 1) stated, "Without an 'unconscious' awareness or 'subconscious' learning dynamic, there exists no basis for psychology."

Recent work in cognitive psychology has seen numerous attempts to dissociate the unconscious state from its Freudian roots, using terms such as "implicit" or "automatic." These practices highlight the extent of cognitive processing that occurs without conscious awareness and demonstrate a lack of awareness about the influence of cognitive processes on behaviour (Greenwald et al. 1996, Smith and DeCoster 2000, Naccache et al. 2005, Gaillard et al. 2006, Kiefer and Brendel 2006). Implicit memory and nonconscious knowledge acquisition are two active research areas related to the unconscious state (Lewicki et al. 1992).

Over the years, the specifics of the Freudian model have not held up well under empirical tests. However, in broad strokes, cognitive and socio-psychological evidence supports the existence of unconscious mentation as proposed by Freud and its ability to influence judgment and behaviour (Westen 1999). Based on empirical evidence, suppressed emotions, automatic behaviours, subliminal perceptions, automatic responses, and possibly complexes, hidden phobias, and secret desires are included in unconscious phenomena (Westen 1999). Nevertheless, the processing of conscious, subconscious, and unconscious information largely depends on how the state of mind is defined.

Independence in Mind Learning

Conscious Mind

The conscious mind can learn independently (Figure 1*a*). Holender (1986) observed that semantic activation is usually accompanied by conscious identification and that a stimulus not focused on closely enough is quickly forgotten. However, this does not imply that the stimulus is acted upon subconsciously. Pierson and Trout (2017) hypothesized that consciousness evolved to enable volitional movements. An example would be questioning seeing something when no information is available in the subconscious or unconscious mind.

Subconscious Mind

The subconscious mind can learn independently (Figure 1b), and numerous studies have found that its information processing is faster than that of the conscious mind. Lewicki et al. (1992) examined and summarized evidence for information acquisition beyond consciousness, including

covariations, subconscious indirect and interactive inferences, and self-reinforcing procedural knowledge. These findings showed that nonconscious information-acquisition processes surpass consciously controlled cognition in speed, structural sophistication, and the capacity to process multidimensional and interactive relationships between variables. These non-conscious information-acquisition mechanisms facilitate the development of procedural knowledge, which is essential for critical cognitive functions such as encoding, interpreting stimuli, and evoking emotional responses.

Notable studies (Krashen 1982, 1988) have differentiated between subconscious and conscious language learning, asserting that adults use two independent systems for developing second-language capability: subconscious language acquisition and conscious language learning. These systems are closely connected. Subconscious acquisition, a distinct process that facilitates rule acquisition at the subconscious level, appears to be more important than conscious language learning. Several studies (Krashen 1988, Davies and Pearse 2000) concur with this distinction, affirming that language acquisition is "the process of subconsciously learning a language while being exposed to it and using it in communication" (Krashen 1988, p. 105).

Unconscious Mind

Unconscious mind learning can be autonomous (Figure 1c). Many work-related learning processes are unconscious (Eraut 1998, Doornbos and Krak 2001). Information processing can also occur as unconscious learning during anesthesia. Studies using indirect or implicit memory tests have shown that stimulus registration occurs without conscious awareness

during anesthesia, although not always (Jelicic et al. 1992).

Hasher and Zacks (1984) conducted extensive research to demonstrate that individuals record information about the frequency of events unconsciously (i.e., outside of conscious awareness and without the use of conscious information-processing resources) with relative accuracy. Perceivers do this automatically, regardless of the directions or motivations for information processing. This ability has little or no correlation with an individual's age, educational level, mental capacity, or personality (Connolly 1993). Thus, this could be a crucial component of how humans perceive their environment and acquire procedural knowledge and experience.

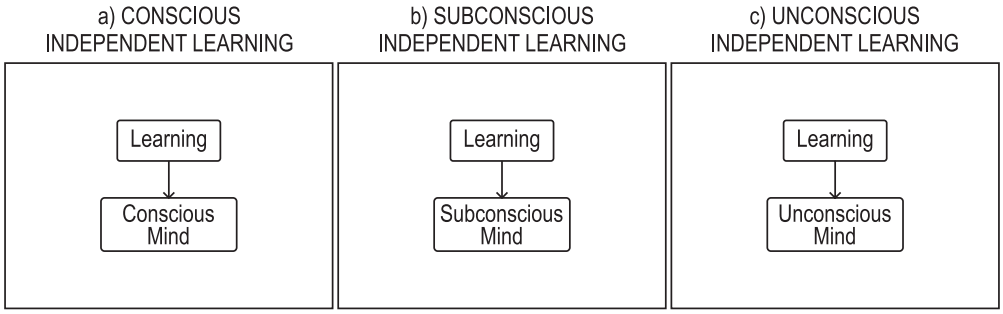

Figure 1

Relationship Between Conscious, Subconscious, and Unconscious Mind States

Before delving into the learning process of the mind, it is crucial to understand the relationships between the three states of the mind: conscious, subconscious, and unconscious.

Conscious-to-Conscious, Unconscious-to-Unconscious, and Subconscious-to-Subconscious Mind Learning

Fisher (2010) proposed a four-stage model of learning, where a learner starts at Step 1 and concludes at Step 4. The stages are as follows:

1. "Unconscious incompetence": This occurs when an individual is unaware of the existence or relevance of a skill.
2. "Conscious incompetence": The individual becomes aware of the existence and importance of the skill.
3. "Conscious competence": The individual can consistently perform the skill at will.
4. "Unconscious competence": The skill is refined to the point where it becomes "second nature" and enters the unconscious regions of the brain (Fisher 2010, pp. 3–2). This model explains the transition from conscious to unconscious learning.

Van Fleet (1987) explained that once the subconscious mind establishes a successful response, it enables the subconscious mind to achieve the specific goal set by the conscious mind. This procedure is then stored and remembered for future use. The subconscious mind repeats this successful response in future trials, regardless of the activity (e.g., eating, riding a bicycle, driving a car, playing golf or tennis, catching a ball, playing the piano or guitar). The subconscious mind learns to respond appropriately because that is what the conscious mind has directed it to do. The subconscious mind remembers its successes, discards its failures, and repeats the successful actions habitually without any further thought or direction from the conscious mind. This further elucidates the existence of the conscious, subconscious, and unconscious mind states.

Conscious-to-Subconscious and Subconscious-to-Conscious Mind Learning

Fregger (2003) posited that inspiration, insight, and realization all originate from the "subconscious," underscoring

the codependent relationship between the subconscious and conscious mind. The distinction between one's conscious and subconscious mind provides evidence for this phenomenon. Subconscious activities, such as informational, intellectual, and emotional memories, are based on acquired knowledge or ingrained memories. The subconscious can act on consciously acquired knowledge; however, it cannot independently perceive anything. It cannot see, hear, touch, taste, or smell. Only recapitulated memories of these senses can enable its function. For instance, the subconscious can drive a car using previously memorized algorithms and automatically stop at a red light. It also enables humans to adjust their manner of speaking when interacting with different individuals, such as a professor, parent, or friend (Leodolter 2017), as these behaviours are learned from the conscious mind.

Moreover, when an emotion is consistently satisfied, the subconscious and conscious goals related to that emotion change. Some studies (Shiffrin and Dumais 1981, Schneider & Fisk 1982) have revealed that stimuli or certain circumstances could trigger automatic subconscious processing and cause subconscious goals to surface when reinforced by repeated encounters.

Conscious-to-Unconscious and Unconscious-to-Conscious Mind Learning

Strahan et al. (2002) studied persuasion and subliminal priming, examining whether brief exposure to thirst-related words influenced beverage selection. Participants were instructed to focus their attention on a screen that flashed words for 16 ms. Participants exposed to words associated with thirst showed a preference for more thirst-quenching

beverages, while participants in the control group more often preferred other types of beverages. Thus, we can infer a connection between conscious (visual perception) and unconscious (thirst quenching) mind learning.

Recent research suggests that unconscious knowledge can sometimes become conscious knowledge (Pang and Elntib 2021), similar to how normally conscious content can become unconscious due to distractions, such as visual masking or inattention (e.g., attentional blink). Simons (2003) presented the four possible combinations of conscious and unconscious processes and their outcomes on learning with examples.

Subconscious-to-Unconscious and Unconscious-to-Subconscious Mind Learning

Repeated inspiration or motivation can cause changes in thoughts that humans are unaware of, raising the question of whether one individual can influence another's thoughts without their knowledge and enable them to act upon it subconsciously. This phenomenon could explain unconscious-to-subconscious mind learning. Implanted words and thoughts in the subconscious mind can shape an individual's behaviour, actions, and responses. This can explain subconscious-to-unconscious mind learning. A useful example of this is the phenomenon of gaslighting, which can occur from subconscious-to-unconscious or unconscious-to-subconscious mind learning. Gaslighting can also represent a person's subconscious tendency to manipulate others into doubting their sanity, and this disposition varies by individual characteristics and the personal morals they have obtained from unconscious-to-subconscious mind learning (Latif 2020). A study that employed the terms "gaslighter"—the person